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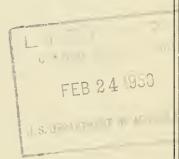
FROZEN FOOD LOCKER COOPERATIVES IN ILLINOIS 1948

By

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and

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COOPERATIVE RESEARCH AND SERVICE DIVISION

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SUMMARY

Locker plant construction and expansion, which had increased rapidly since the war, slowed down materially during 1948 due to excessive building costs and less favorable operating conditions.

Increased competition, mounting operating costs, lessened demand for rentals, together with a tightening of credit, have all been factors making it more difficult for locker plant managers to make satisfactory savings. It has been especially difficult for those associations which have recently constructed high cost facilities.

In summary the findings of this study are:

- 1. Total assets of 35 associations studied operating 95 locker plants, amounted to \$3,299,000, or an average of \$94,000 per association. Investment in fixed assets, after deducting depreciation, totalled \$2,776,000. Net worth of the associations totalled approximately \$1,921,000, of which 88 percent was capital stock and 12 percent retained net savings. Total assets per association increased 7 percent over last year. The investment in fixed assets for the 95 plants is approximately \$66.72 per locker compared with \$59.19 in 1947, and \$48.60 in 1946.
- 2. Receipts averaged \$41,929 per association or \$33.11 per locker rented. This represents an increase of \$8,705 per association or \$3.37 per locker over the previous year. Thirty-nine percent of receipts was derived from locker rentals; 27 percent from cutting, wrapping, freezing, and grinding; 16 percent from additional processing such as slaughtering, curing, smoking, lard rendering, poultry dressing, and fruit and vegetable processing, and 18 percent from sales, storage, and other income. The proportion of total receipts from locker rentals declined from 42 to 39 percent from processing 46 to 43 percent; while receipts from sales increased from 12 to 18 percent compared with a year ago.

For the 5-year period 1943-44 to 1947-48 total receipts per locker rented increased 47 percent. Of this total increase, rentals accounted for 12 percent; processing, 47 percent; and other receipts, principally sales of food, supplies, and inedible products more than 300 percent.

3. Total operating expenses averaged \$39,143 per association, or \$30.55 per locker rented, compared with \$30,947 per association and \$26.00 per locker a year ago. Labor, depreciation, and utilities are the three major expense items, amounting to over three-fourths of all expenses. The cost of labor and management alone accounted for 50 percent of all expenses and amounted to 46 percent of total receipts.

For the 5-year period 1943-44 to 1947-48 total operating expenses per locker rented increased 65 percent. Of this total, labor expense increased 66 percent; utilities, 44 percent; fixed charges, 78 percent; and other expenses 60 percent.

 $^{^1}$ One association was excluded from the analysis of the balance sheet because it was not possible to segregate its other operations from that of the locker business.

4. Net savings, before deducting interest and income tax, averaged \$3,277 per association or \$2.56 per locker rented and \$1,620 or \$1.26 per locker after deducting these items. Compared with last year net savings declined \$1,186 per association or \$1.18 per locker before deducting interest and income tax, and \$1,532, or \$1.30 per locker, after deducting these items.

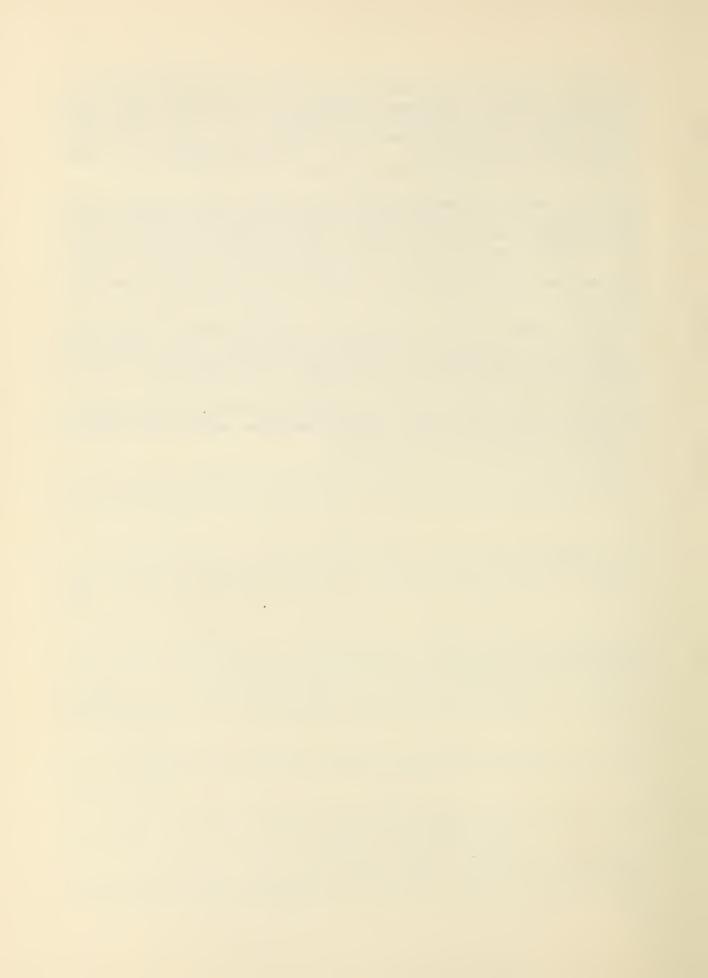
Net savings per locker rented were lowest in the past 5 years. Savings before payment of income taxes and interest averaged only 7.7 percent of total receipts compared with 12.6 in 1947-48; 14.5 percent in 1945-46; and 18 percent in 1943-44. Highest net savings were obtained from 1940 to 1942 when they ranged from 20 to over 23 percent of gross income.

- 5. Meat and poultry, processed by 36 associations amounted to 7,530 tons and averaged 327 pounds per locker rented, compared with 394 pounds last year. This was a decline of 18 percent from the previous year and 19 percent below the average of the preceding 3 years.
- 6. Labor and management cost per dollar of processing income averaged \$1.04 or 8 percent above the 96-cent average of a year ago and 9 percent above the average of the past 4 years. Lower volume processed per locker plus inefficient use of labor was largely responsible for this poorer showing.
- 7. Rates and charges increased moderately over the previous year. Locker rentals averaged \$12.95 or 41 cents over last year, while charges for cutting, wrapping, freezing, and grinding were approximately 50 cents per 100 pounds above a year ago.
- 8. The proportion of lockers installed that were rented throughout the year averaged 90 percent, the same as last year. The percentage of capacity that was occupied by rented lockers declined from 87 to 84 percent, indicating that more bulk zero storage was being used than a year ago.
- 9. Slaughter volume in most associations continued very low during the year. The yearly average of 12 associations was 358 cattle and 898 hogs per plant. It is doubtful if income from slaughtering this small number is adequate to cover operating costs in most associations. This is particularly true of those associations with heavy investment in slaughter facilities.
- 10. Processing for non-locker patrons continued at a low level with most associations reporting less than 10 percent of processing from non-locker patrons.
- 11. Volume of poultry dressed showed little change from that of a year ago and was still of minor importance in most associations.
- 12. Power consumption showed but little change compared with last year. Yearly consumption per locker averaged 72 kilowatt-hours in 1948 compared with 73 kilowatt-hours in 1947.

- 13. During the period covered by this study little new construction took place. While 5 additional slaughter and 6 new locker plants were put into operation most of the construction took place the previous year. Half of the 36 associations included in the study now provide slaughtering facilities, 32 of them do curing and smoking, 31 render lard, and 9 have poultry dressing equipment at their plants.
- 14. In general the associations failed to show improvement in operating results over the previous year. Only 25 percent of them realized net savings of \$5 or more per locker rented compared with 42 percent in 1947, while 19 percent showed losses compared with 15 percent a year ago. As expected, the associations making the poorest showing were, for the most part, those which have expanded facilities during recent high-cost years.

Increased competition, low processing volume, high seasonal fluctuations in processing income, high investment, high power costs, high labor costs, and too many unrented lockers were factors responsible for much of the poorer results obtained in 1947-48.

The study indicates the need for improved operating efficiency, increased volume, reduced costs, expanded services, and a much better job of public relations and merchandising.



FROZEN FOOD LOCKER COOPERATIVES IN ILLINOIS

Ву

L. B. Mann

and

Paul C. Wilkins
Agricultural Economists

The frozen food locker industry in the past 10 years has experienced phenomenal growth. From less than 1,300 plants in 1938 the industry has grown to more than 11,000 plants in July 1949. During the past year, due to high construction costs, increased competition, tighter credit, and reduced earnings this expansion has materially slowed down.

Total number of locker plants in Illinois, as reported by the State Department of Agriculture, on January 1, 1949, was 595 and of these approximately 120 are owned and operated by 49 cooperatives.

PURPOSE

This survey, made at the request of the Illinois Cooperative Locker Service, is based on an analysis of 36 associations operating 101 plants affiliated with the State association. These plants have a capacity of 54.930 lockers with 51.400 installed.

The purpose of this study is to provide directors, plant managers, and others responsible for and interested in locker plant operations with information on the operations of the associations and on the relative efficiency and success of each association. Information is also presented to show the changes which have occurred in recent years and the factors that may have accounted for these changes.

All associations have facilities for chilling, aging, cutting, wrapping, and freezing. Thirty-two cure and smoke meat, 31 render lard, and 18 operate slaughter facilities. The period covered by this survey is the fiscal year of each association ending in 1948 with the exception of one ending in February 1949.

BALANCE SHEETS

The Composite balance sheet covering 35 of the 36 associations is shown in table 1. One association was deleted because it was not possible to segregate its other operations from that of the locker business.

NOTE: The authors express their appreciation to Jane H. Click for assistance in preparing this report.

Table 1. - Composite and average balance sheet for 35 Illinois locker cooperatives, 1948¹

Assets	Total	Average	Percent	Liabilities	Total	Average	Percent
Current assets:			-	Current liabilities:			
Cash on hand and in bank	\$154,380.73	\$4,410.88	4.68	Accounts payableNotes naveble	\$93,715.40	\$2,677.58	2.84
Accounts receivable - trade	118, 795. 25	3,394.15	3.60	Taxes payable (Social Security,	00:100:001	1,130.01	0
Accounts receivable - other	7,904.42	225.84	. 24	State, and local)	21, 132. 68	603.79	20.
Reserve for doubtful accounts	(6,499.72)	(185.71)	(.19)	Federal income tax payable	25,614.50	731.84	.77
Merchandise inventory	58,390.00	1,668.28	1.77	Accrued expenses payable	12, 184. 78	348.14	.37
				Dividends payable - Freierred Stock	3 242 07	1,244.34	1.32
Total current assets	374,667.23	10,704.77	11.36	Accrued interest	5,632.98	160.94	.17
				Reserve for expenses payable	651.76	18.62	.02
				Total current liabilities	372, 258.40	10,635.95	11.28
Deferred charges:							
Prepaid plant supplies and expense	40,902.74	1,168.65	1.24	Deferred income:			
Other deferred characes	34,458.00	984.51	1.05	Unearned locker rentals	244,585.43	6,988.16	7.41
Total deferred charges	77,814.82	2,223.28	2.36				
				Noncurrent liabilities:			
Investments:				Notes payable	737, 369.58	21,067.70	22.35
Stock - other cooperatives-2	70,999.58	2,028.56	2.15	Key deposit	761,371.50	21,753.47	23.08
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$				Total	1 378 215 33	30 377 58	41 77
באאר מממטרמי				TOTAL TRADITIONAL	1,370,413.33	25, 371, 30	47.77
Land	90,583.04	2,588.09	2.75	Net worth			
Total fixed assets	3,356,663.03	95,904.66	101.73	Capital stock:			
Less: Reserve for depreciation	(580,559.76)	(16,587.42)	(17.60)	Issued and outstanding	1,695,787.32	48,451.06	51.39
Net book value	2,776,103.27	79,317.24	84.13	Total net worth	1,921,369.57	54,896.27	58.23
Total assets	3,299,584.90	94, 273.85	100.00	Total liabilities and net worth	3,299,584.90	94, 273.85	100.00
					The second secon		

 1 Association 14 excluded because locker operation combined with other business enterprise.

SOURCE: Based on audit reports of the associations.

The combined balance sheet shows that total assets of the 15 associations amounted to \$3,299,585, an average of \$94,274 per association. Investment in fixed assets, after deducting depreciation, totaled \$2,776,103 or \$79,317 per association. Net worth of the combined associations was approximately \$1,921,369 or \$54,896 per association. Eighty-eight percent of net worth consists of capital stock and 12 percent of retained net savings.

The investment in fixed assets averaged \$66.72 per locker compared with \$59.19 in 1947, and \$48.60 in 1946.

The balance sheet shows the ratio of current assets to current liabilities as 1.01 to 1. Most analysts consider that current assets should be twice as large as current liabilities. On this basis, the showing made by several associations is not satisfactory.

The ratio of borrowed funds to the book value of fixed assets is the highest in 5 years. This is due largely to the expansion program which has resulted in a rapid increase in funds borrowed for plant construction. The average ratio of the book value fixed assets to term indebtedness is now 1 to .27 compared with 1 to .23 in 1946 and 1 to .18 in 1944.

Retained net savings now total \$225,582 or \$18,326 more than a year ago. In ratio to outstanding capital stock, however, retained net savings are at their lowest point during the past 5 years. For each dollar of outstanding capital stock there is only 13 cents of retained net savings compared with 14 cents in 1947; 16 cents in 1946; and 21 cents in 1945.

OPERATING STATEMENTS

The figures in table 2 were assembled from the associations' audit reports and cover 2 fiscal years. Thirty-six associations were included in the 1947-48 analysis and 33 in the 1946-47 analysis. Inasmuch as the same number of associations is not shown for both periods, the data of most value are those showing average income, expense, and savings. On the average, both income and expenses increased over the preceding year. Total operating income averaged \$41,929 per association, an increase of

The term "income" is used in this report because it is in customary use by the Illinois locker cooperatives and therefore is well understood by their managements and patrons. Most cooperative authorities do not favor the use of the word "income" to describe the normal operating receipts of a cooperative which is obligated by agreement to distribute such receipts, less expenses and other authorized deductions, to its patrons in proportion to the volume of business done with each patron.

Table 2. - Composite and average income and expense statement (comparative)1 - Illinois locker cooperatives, 1947-48 and 1946-47

	Fisca March 31,	Fiscal years ending between March 31, 1948, and February 23, 1949	tween y 28, 1949	Fine December 3	Fiscal years ending between December 31, 1946, and November 30, 1947	ber 30, 1947	Average
Item	Total	Average	Percentage of operat- ing income	Total	Average	Percentage of operat- ing income	increase or decrease
Torono							
Earned locker rentals	\$597,443.46	\$16,595.65	39.58	\$492,734.56	\$14,931.35	42.39	\$1,664.30
Cut, wrap, freeze, and grind	412,697.18	11,463.81	27.34	350,711.53	10,627.62	30.17	836.19
Cure and amokessessessessessessessessessessessessess	39,350.58	2,481.96	5.92	83,157.66	2,519.93	7.15	(37.97)
Lard renderessessessessessessessessessessessesses	32, 296.04	897.11	2.14	25,373.61	768.90	2.18	128.21
Slaughter	75,646.30	2,101.29	5.01	31,907.28	966.89	2.74	1,134.40
Poultry processing	19,767.80	549.11	1.31	9,253.22	280.40	.80	268.71
Fruits and vegetables	29,593.68	822.05	1.96	26,473.02	802.21	2.28	19.84
Sales:							
Inedible products	138,941.63	3,859.49	9.21	95,200.75	2,884.87	8.19	974.62
Food and supplies	102,219.67	2,839.43	6.77	35,578.12	1,078.13	3.06	1,761.30
Other plant income	11,494.36	319.29	.76	12,126.93	367.48	1.04	(48.19)
Total operating income	1,509,450.70	41,929.19	100.00	1,162,516.68	35,227.78	100.00	6,701.41
Expenses:							
Salaries and wages	703,054.22	19,529.28	46.57	528,766.52	16,023.23	45.48	3,506.05
Utilities	152,677.67	4,241.05	10.12	109,359.41	3,313.93	9.41	927.12
Laundry	11,745.21	326.26	.78	9,169.37	277.86	. 79	48.40
Plant supplies	105,324.30	2, 925.67	85.9	77,826.69	2,358.38	69.9	567.29
Plant repairs	38,795.28	1,077.65	2.57	33,518.71	1,015.72	2.88	61.93
Licenses and taxes	37,455.32	1,040.42	2.48	16,883.59	511.62	1.45	528.80
Bonding and insurance	40,026.88	1,111.85	2.65	20,658.80	626.02	1.78	485.84
Educational and promotional	21, 193. 14	588.70	1.41	13,429.08	406.94	1.16	181.76
Directors' per diem, legal and audit	26,756.43	743.23	1.77	20,764.23	629.22	1.79	114.01
Office supplies and expenses	30,952.74	859.80	2.05	25,030.48	758.50	2.15	101.30
Bad debts and lossed	8,429.62	234.16	.56	4,426.70	134.14	.38	100.02
Truck, suto, and mileage	14,620.30	406.12	76.	15,887.73	481.45	1.37	(75.33)
Depreciation and rent	209,079.35	5,807.76	13.85	139,624.57	4, 231.05	12.01	1,576.71
Other expenses	9,035.33	250.98	.60	5,896.16	178.67	.51	72.31
Total operating expenses	1,409,145.79	39,142.94	93.36	1,021,242.04	30,946.73	87.85	8, 196.21
Net operating income	100,304.91	2,786.25	6.64	141,274.64	4,281.05	12.15	(1,494.80)
Other income:							
Nonoperating and miscellaneous	17,687.60	491.32	1.17	6,009.04	182.09	.52	309.23
Total	117,992.51	3,277.57	7.81	147,283.68	4, 463. 14	12.67	(1,185.57)
Other expenses:							
Interest	35,056.66	973.80	2.32	17,771.95	538.54	1.53	435.26
Federal income tax	24,622.76	683.96	1.63	25,484.34	772.25	2.19	(88.29)
Total other expenses	59,679.42	1,657,76	3.95	43,256.29	1,310.79	3.72	346.97
Net savings	\$58.313.00	\$1,619.81	23.86	\$104.027.39	\$3,152.35	8.95	(1.532.54)

123 associations included in 1946-47 analysis and 36 associations in the 1947-48 analysis. And savings of 3.88 percent based on total operating income. In table 6 net savings of 3.82 percent based on total gross income.

\$8,705 over the preceding year. Earned locker rentals increased \$1,664 but declined from 42 percent to 39 percent of total operating income. Cutting, wrapping, freezing, and grinding services produced \$836 more than the preceding year but dropped from 30 percent to 27 percent of total operating income. Income from slaughtering increased \$1,134 per association or from less than 3 to 5 percent of operating income. Sales of inedible products increased \$974 from 8 to 9 percent of total operating income, while sales of food and supplies increased \$1,761 or from 3 to nearly 7 percent of operating income.

The important factors contributing to changes compared with a year ago were: (1) Increased rental and processing income due largely to higher rates; (2) increased returns from slaughtering; and (3) increased revenue from sales of food, supplies, and inedible products.

The gains shown in income, however, were accompanied by even greater increases in expenses. Total operating expenses increased from \$30,947 per association in 1946-47 to \$39,143 in 1947-1948. Cost of labor represented 42 percent of the increase. Depreciation, utilities, and plant supplies also showed significant increases. As a percentage of total operating income, however, the various expense items showed little change. Salaries and wages increased 1 percent, utilities and plant supplies remained the same, while depreciation and rent increased 2 percent.

Net savings for the entire group of associations averaged \$3,277 per association before paying interest and income taxes, and \$1,620 after paying these items. Net savings per association show a drop of \$1,186 before deducting interest and income taxes and \$1,832 after paying these items, as compared with last year. As a percentage of total operating income, net savings dropped from 9 percent in 1947 to less than 4 percent in 1948. This indicates that the increase in expenses over the previous year was relatively greater than increases in income.

Trends in income, expenses, and net savings per locker rented from 1943-44 to 1947-48 are shown by table 3. For the 5-year period total income increased \$10.52 per locker, of which \$4.60 came from processing, \$1.42 from rentals, and \$4.50 from other sources. In spite of this substantial gain in revenue, expenses increased \$12.03 per locker for the same period. Labor was responsible for \$6.07 of this increased expense; fixed charges \$3.09; other expenses \$1.86; and utilities \$1.01. For this 5-year period net savings, before deducting income taxes and interest, declined from \$4.07 in 1943-44 to \$2.56 in 1947-48.

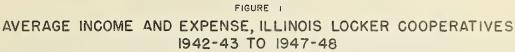
Changes in average income, expense, and net savings for a six-year period, 1942-43 to 1947-48, are shown on a percentage basis in figure 1. During the first 3 years, locker rentals represented 50 percent or more

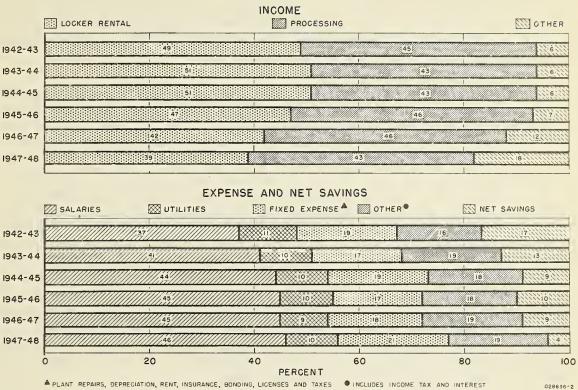
Table 3. - Income, expense, and net savings per locker rented before income tax and interest, Illinois locker cooperatives, 1943-44 to 1947-48

Item	194	1943-44	194	1944-45	1945-46	-46	1946-47	-47	194	1947-48
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percept
Income:	11.53	51	11.69	51	12.02	47	12.54	42	12.95	39
Processing	9.70	43	9.96	43	11.89	46	13.69	46	14.30	43
Other	1.36	9	1.44	9	1.75	7	3.51	12	5.86	18
Total	22.59	100	23.09	100	25.66	100	29.74	100	33.11	100
Expenses:										
Labor	9.17	41	10.14	44	11.60	45	13.46	45	15.24	46
Utilities	2.30	10	2.40	10	2.66	10	2.78	6	3.31	10
Fixed charges1	3.96	17	4.38	19	4.22	17	5.35	18	7.05	21
Other	3.09	14	3.29	15	3.48	14	4.41	15	4.95	15
Total	18.52	82	20.21	88	21.96	86	26.00	87	30.55	92
Net savings	4.07	18	2.88	12	3.70	14	3.74	13	2.56	&

1 Plant repairs, depreciation, rent, insurance, bonding, licenses, and taxes.

SOURCE: Based on audit reports





of total income, while in 1947-48 they dropped to 39 percent. Processing income increased to 46 percent during 1945-46 and 1946-47 but dropped back to 43 percent in 1947-48. The greatest change in percentage income is shown in other income, largely from increased sales of frozen foods, locker supplies and by products which went from 6 percent in the first 3 years to 18 percent in 1947-48.

Most important changes in expenses for the 6 year period have taken place in labor costs. This expense increased from 37 percent in 1942-43 to 46 percent in 1947-48. Next to labor, fixed expenses have shown the greatest increase. These expenses increased from 17 to 21 percent. Utilities and other expenses have shown very little change percentagewise during the period.

Net savings, after deducting income taxes and interest, as a percent of total receipts, show the greatest change, from 17 percent in 1942-43 to 4 percent in 1947-48. Labor expense is one of the most important factors affecting the decline in net savings.

ANALYSIS OF INCOME BY ASSOCIATIONS

In table 4 income by major items is shown for each association. In order for the information to be comparable, the income is shown on a locker-rented basis.² Where associations were engaged in activities not related to their locker operations, the receipts and expenses realized from these "outside" operations were excluded.

Associations shown in this table are grouped according to rates charged for cutting, wrapping, freezing, and grinding and listed by code number according to net savings per locker rented. Average income for each service is the average for only those associations offering the service.

Average gross income for the 36 associations was \$33.11 per locker rented or \$3.37 more than the previous year, an increase of 14 percent. The 16 associations in group I, charging 3 to 4 cents per pound for cutting, wrapping, freezing, and grinding, averaged \$35.69 per locker rented while 20, charging from 2 to 3 cents per pound (group II), averaged \$31.21.

Locker rentals for the entire group of associations averaged \$12.95 per locker which represented 39 percent of gross income compared with 42 percent in 1946-47. Locker rentals ranged from \$10.37 to \$16.00 per locker. Rentals averaged 41 cents per locker higher than last year. The importance of locker rentals as a percentage of total income has been declining steadily for the past 5 years.

Income from cutting, wrapping, freezing, and grinding varied considerably among the associations. It ranged from \$4.36 to \$16.96 and averaged \$8.95 per locker for the entire group. Associations in group I, with the highest rates, averaged \$9.31 per locker rented. Associations in group II, with lowest rates, grossed \$8.68 for this service.

Average gross income from cutting, wrapping, freezing, and grinding for the entire group of associations was \$8.95 per locker, or practically the same as a year earlier. The volume processed, however, was substantially lower than the previous year, but due to higher rates charged processing income averaged the same.

The second largest processing income was from slaughtering, with an average of \$2.76 per locker compared with \$1.75 a year ago. When the income of \$3.01 per locker from inedible products derived largely from slaughtering, was added this total was \$5.77. The drastic decline in inedible offal prices since this study was made, nowever, has greatly reduced this income.

²Number of lockers rented during the year was computed by dividing earned locker rental income by average rental rate.

Table 4. - Comparative analysis of income per locker rented for 36 Illinois locker cooperatives, 1947-48

				Processing	sing			Sa	Sales			
Association	Earned locker rentals	Cut, wrap, freeze, and grind	Cure and smoke	Lard render	Slaughter	Poultry	Fruits and vegetables	Inedible	Food and supplies ²	Other plant income	Non- operating income	Total income
Group I ³												
27	\$16.00	\$13.57	\$6.60	\$2.22	\$3.16	\$0.58	\$0.75	\$6.62	\$1.56	\$0.04	\$0.04	\$51.14
2	13.55	10.04	1.79		1.65	.25	06.	4.46	3.76		.39	36.79
34	12.88	6.32	2.86	.52	1.87	.42	.75	2.61	1.26	.50	8.	30.79
10	13.96	6.59	2.33	•	•	.77	.36	1.71	1.59	90.	.65	31.02
8	15.15	8.95	2.01	1.02	15.67	.35	.38	2.22	.38	.77	.21	47.11
26	13.44	6.85	2.31	.30	1.54	(+)	88.	1.96	1.49	.27	.03	29.07
30	12.28	8.94	.37	1.16		.42	.43	1.47	.73		.58	26.38
21	10.37	4.36	2.00	.38		. 29	.50	1.55	.25	•		19.70
16	11.76	11.23	.21	,	2.78	.37	.21	3.15	. 19	١	.22	30.12
14	12.68	9.54	1.20	60.	1.96	.50	.59	3.00	3.14	10.	1.06	33.77
22	12.55	10.94	2.54	.92	2.85	(+)	.49	8.28	5.15		.28	44.00
24	13.72	8.88	2.34	1.00	1.25	.55	1.11	3.04	4.89	.57	.37	37.72
33	14.02	10.28	.47	1.05	1	86.	1.02	1.91	.41	.05	69.	30.88
29	12.55	4.61	2.17	.53		.19	1.59	.03	(.53)	. 44		21.58
36	14.32	5.81	1.76	.59	1.21	.61	2.00	1.22	.94		.03	28.49
6	12.29	16.96	2.36	1.61	2.65	1.94	.35	9.46	13.34	.27	.32	61.55
Average ⁵	13.27	9.31	1.89	69.	3.32	.54	27.	3.43	2.79	. 26	.53	35.69
Group II3												
35	13.08	9.03	3,30	1.24	3.52	1.28	06.	5.03	3.34	1.32	8	42 50
20	13.29	12.12	1,32	1.26	3.14	(#)	88	3.99	1.55	8 10	3 .	38 14
25	12.69	7.46	2.76	19.	•	.54	.79	1.20	05	2	36	26.87
1	12.44	11.51	3.29	1.06	•	(#)	.82	2.52	.52	18	30	32.64
31	13.82	8.56	2.91	89.	1.68	.75	.47	2.70	2.56		.15	34.28
4	12.75	12.60	2.44	1.95	,	(4)	.14	2.23	3.19	.03	.34	35.67
17	12.00	12.31		.20		.27	.34	2.54	.45	1.52	.13	29.76
23	13.90	6.97	2.68	1.33	3.16	83.	.57	4.94	3.29	.05	.13	37.85
13	12.62	7.29	2.70	1.18		. 29	.24	2.31	.37	80.	.55	27.63
11	12.79	10.16	4.86	1.47		(+)	.30	2.87	1.69	80.	.49	34.71
3	13.12	10.98	1.75	.81	1	.54	.74	2.75	1.53	1.73	•	33.95
2	11.47	11.11	2.50	.75		.34	.17	2.36	2.40		.35	31.45
9	12.75	7.74	1.26	1.08		.37	.35	2.55	1.57		60.	27.76
19	12.71	4.61		٠,	2.47	(4)	.65	2.87	2.73	•	.42	26.46
15	12.20	10.09	1.92	0.73	,	.38	.41	3.01	.37	.01	•	29.12
12	13.63	7.32	1.26	.50	2.00	44.	1.09	2.81	. 74		.21	30.00
32	13.81	7.66	1.94	69.	1.26	(4)	.94	1.54	4.13	.82	.67	33.46
18	12.14	6.72	1.87	1.11	2.43	86.	.50	3.50	3.22	•	.45	32.92
28	12.99	4.56	1.52	.40	.61	. 40	98.	1.76	1.10	.02	.67	24.89
7	12.40	98.9	.22	.33		(+)	.26	1.83	.49	. 53	.02	22.94
Average ⁵	12.72	8.68	2.15	.87	2.06	.56	.56	2.70	1.79	.52	.35	31.21
Combined average5	12.95	8,95	2.03	.81	2.76	55	64	3.01	2.22	41	43	33 11

Sales of food and supplies, averaging \$2.22 per locker, showed the largest increase of any service as compared with a year earlier when they averaged only 91 cents per locker rented. Many associations gave more attention to selling fresh and frozen meats and poultry, and a few to cured and sausage products. It is believed that in the future these activities will provide an increasing share of the association's income.

Curing and smoking one of the most profitable operations in a locker plant, averaged \$2.03 per locker and ranged from 21 cents to \$6.60. Income from curing was 25¢ per locker under 1947.

The data presented in table 4 indicates a wide range in both total income as well as income from various services among the associations. Highest per locker income was \$61.55, reported by association 9 while lowest was \$19.70 in association 21. Both of these associations had approximately the same processing charges but association 9 had a locker rental rate averaging nearly \$2.00 higher. Association 9 offers complete processing service, including slaughtering, and serves more than one plant while association 21 offers limited service for one locker plant only.

ANALYSIS OF EXPENSES BY ASSOCIATIONS

Total operating expenses for the 36 associations averaged \$30.55 per locker rented and total expenses (including income taxes and interest) averaged \$31.85 table 5. On the average these expenses show an increase of 17 percent or \$4.55 per locker rented over the previous year. Salaries and wages amounted to nearly 50 percent of all expenses and absorbed 46 percent of income. The average cost of labor was \$15.24 per locker rented or 13 percent more than the previous year. Group I had the highest labor cost at \$16.94 per locker compared with \$13.99 for group II.

Depreciation and rent is the second highest expense item. This expense ranged from \$1.47 to \$14.07 and averaged \$4.53 per locker rented. Differences in investment in fixed assets and in depreciation rates account for most of the variations. Compared with a year earlier depreciation costs averaged approximately \$1.00 per locker higher.

Utility costs averaged \$3.31 and ranged from \$2.23 to \$7.62 per locker rented. Variations in power and water rates, cost of fuel, volume of products processed, and number of processing services rendered by associations account for much of the difference. Utility costs were 53 cents more per locker than the previous year.

Cost of plant supplies ranged from \$1.08 to \$5.71 and averaged \$2.28 per locker compared with \$1.98 last year. This represents largely increased costs of wrapping paper and other processing supplies, as volume processed was lower than the previous year.

Plant repair and maintenance costs averaged 87 cents per locker compared with 85 cents a year earlier.

SAVINGS

Net savings of all associations averaged \$1.26 per locker (after deducting income taxes and interest) and \$2.56 before deducting these items (table 5). Compared with the previous year net savings, after deducting interest and income tax, were \$1.39 per locker lower and were the smallest in the past 8 years.

Associations in group I with higher average rentals, processing rates, and larger gross income, averaged only 44 cents net savings per locker which was substantially below the average of all associations. Most of this poor showing was due to substantial losses incurred by 5 associations which constructed new high cost facilities within the past 2 years.

Associations in group II with lower rental and processing rates averaged \$1.87 per locker or 61 cents over the average for the combined group of plants. Four associations in group II showed losses but only two were of substantial proportions and one of these had expanded facilities during the past year.

On a percentage basis, net savings for the 36 associations averaged 7.73 percent of gross income before paying income taxes and interest and 3.8 percent after paying these expenses. Twenty-one associations had net savings averaging more than 12 percent, before income taxes and interest, while 7 associations operated at a loss (table 6).

Table 7 shows net savings as a percent of gross income for the 8-year period 1940-41 through 1947-48. The period of greatest savings was from 1940-41 through 1943-44. In this period savings, before interest and income tax, averaged 19.6 percent. Low fixed costs, low labor costs, and active demand for locker services were factors largely responsible for these favorable operations. Since 1944 all costs have increased sharply.

Table 8 shows net savings, before paying income taxes and interest, compared with cost of fixed assets. Net savings per association, as a percentage of investment, ranged from 16 percent to a loss of 3.8 percent and averaged 5.3 percent for the group. Of the 27 associations included in this analysis 9 had net savings of more than 10 percent of investment, 12 netted 5 to 10 percent, and 4 showed a loss.

Table 9 shows a comparison of net savings as a percentage of investment for the 8-year period, 1940-41 through 1947-48. Net savings ranged from 5.33 percent in 1947-48 to 14.56 in 1942-43 and averaged approximately 10 percent for the period.

PROCESSING VOLUME

Table 10 furnishes data on the total pounds of meat and poultry processed during the year in each association as well as the average pounds processed per locker rented. The 36 associations processed a total of 7,530 tons of meat and poultry and averaged 327 pounds per locker rented compared with 394 pounds a year earlier.

Table 5. - Comparative analysis of expenses per locker rented for 36 Illinois locker cooperatives, 1947-48

Association	Salaries and wagesl	Utilities	Laundry	Plant supplies	Repairs and maintenance	Licenses and taxes	Bonding and insurance	Educational and promotional	Directors per diem, legal and audit
Group I ²									
27	\$21.26	\$4.32	\$0.33	\$4.08	\$1.69	\$1.18	\$0.92	\$0.74	\$1.11
5	16.39	2.73	.22	2.40	1.34	.82	68.	.41	.31
34	10.78	3.22	60.	1.92	1.83	.42	. 73	.40	.55
10	14.36	2.59	. 22	2.27	.72	.83	98.	.31	.38
88	22.38	3.33	.11	5.71		1.54	1.03	.57	.71
26	99.66	4.12	.31	1.96	.63	1.18	. 72	.47	09.
30	9.32	4:33	.07	1.46	1.09	06.	.34	06°	.38
21	8.57	2.23	.13	2.51	.12	.80	.35	. 10	. 22
16	17.65	2.83	.26	1.53	. 58	.40	.52	.10	.51
14	17.07	3.04	.30	2.32	99.	.64	. 74	.57	. 64
22	21.58	5.34	. 32	2.64	1.72	1.35	1.29	.51	.91
24	20.72	3.80	.34	2.26	. 68	.59	1.11	. 49	.65
33	14.32	3.97	.34	1.25	1.08	. 53	1.39	.61	1.26
29	8.56	4.35	.40	1.92	66.	.87	. 79	.57	3.
36	12.51	4.98	.15	2.16	. 79	1.08	2.12	.34	.50
6	34.65	7.62	.36	3.66	2.	. 95	2.98	1.27	1.46
Average3	16.94	3.64	.25	2.55	66.	.86	1.03	.50	. 64
Group 172									
35	14.81	3 77	13	1 86	90	30	3.5	42	1 70
20	18.56	2.68		1 96	06.	66.	1 38		4.70
25	7.83	2.94	10	1.45	1 14	2 4 4 5	4.30	20.	. 42
1	12.54	2.84	. 27	2.37	. 78	8	. 62	.23	. 53
31	14.38	3.02	.71	1.73	.76	. 73	.32	.25	.71
4	16.70	2.97	.24	2.83	. 59	.53	.75	.42	69.
17	14.39	2.45	.23	2.32	.43	99.	.37	. 28	. 54
23	16.83	3.78	. 35	2.37	.95	.48	.47	.54	.76
13	12.26	2.66	.26	1.60	.41	.37	.35	.18	. 44
11	14.77	3.16	.31	2.91	.92	. 64	.48	08.	.54
3	15.89	3.14	.18	1.89	. 79	.75	.28	.46	.45
2	15.11	2.37	.24	1.75	68.	1.08	89.	.39	4.
9	10.82	3.01	. 23	2.50	1.24	.50	09.	.32	.36
19	11.24	3.13	.12	1.08	.54	.93	. 65	.52	.59
15	14.63	3.06	. 19	2.39	1.01	.04	.78	. 55	. 65
12	13.78	4.22	.20	1.95	.50	.75	. 79	.37	.23
32	13.28	4.05	.46	2.42	.64	.77	1.51	. 74	.81
18	15.38	3.27	.35	2.15	. 53	.77	1.91	.93	.34
28	11.33	2.74	.12	1.81	1,39	1.45	.33	.15	.81
7	12.83	2.97	.19	2.63	.59	.59	. 63	.36	. 65
Average3	13.99	3.07	.26	2.09	64.	. 78	.75	. 43	.54
Combined avg.3-	15.24	3.31	. 25	2.28	.87	18	.87	.46	5.8
0		*****	200	24.4	10.				

Table 5. - Comparative analysis of expenses per locker rented for 36 Illinois locker cooperatives, 1947-48 - Continued

Net	7.44.6.6.9444.4.6.6.944.9.9.9.9.9.9.9.9.9	.44	\$6.50.0000000000000000000000000000000000	1.87	1.26
Total	24.3 24.3 24.2 22.7 22.7 23.3 23.3 23.3 23.3 23.3 23	35.25	20132 20132	29.34	31.85
Federal income tax	21.1 1.1.0 1.0.0 1	09.	2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	.93	.78
Interest	\$0. \$4.9 \$4.9 \$5. \$5. \$6. \$6. \$6. \$6. \$6. \$6. \$6. \$6	68.	1. 29 1. 62 1. 62 1. 62 1. 62 1. 62 1. 62 1. 63 1. 64 1. 65 1.	64.	. 84
Total operating expense	\$40.77 25.116 25.116 25.116 22.188 22.188 22.188 23.30 23.30 23.177 23.1	33.92	23.00 27.75	28.07	30.55
Depreciation and rent	4.6.4.6.4.6.1.4.6.6.6.6.6.6.6.6.6.6.6.6.	5.02	4.4.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.6.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.6.6.4.4.4.4.6.6.4.4.4.4.6.6.4	4.17	4.53
Miscel- laneous expense	\$(0.01) 70 70 	.43	\$ 0.000 0.00	.16	. 29
Truck, auto and mileage	0.37 0.37 0.37 0.87 0.87 0.87	. 46	2 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	.34	.38
Bad debts and losses	\$0.04 .05 .05 .06 .12 .23 .23 .23 .23 .24 .25 .25 .25 .25 .25 .25 .25 .25 .25 .25	91.	26 00 00 00 00 00 00 00 00 00 00 00 00 00	.27	.22
Office supplies and expense	\$0.50 1.00 5.55 5.53 6.53 7.73 7.73 1.00 1.00	.78	266448646688866488668678678	. 59	.67
Association	Group I ² 5- 7- 34 10- 8 26 26 26 27- 16 10- 29 33- 29	Average3	Group II ² 25 25 25 27 28 31 31 31 32 32 32 32 32 32 32 32 32 32 32 32 32	Average3	Combined average3

Includes social security tar, unemployment compensation tar, etc.
Afare per pound for cutting, wrapping, freezing, and grinding: Group I, 3 cents to 4 cents; Group II, 2 cents to 3 cents.
Afare expense per locker for each item based on lockers rented in only those associations having the particular expense. Total average computed on basis of lockers rented in all associations.

#Less than one-half cent per locker rented.

Table 6. - Net savings as a percentage of gross income for 36 Illinois locker cooperatives, 1947-48

Association	Gross income	Net savings l tax and	pefore income interest	Net savings as	
	Dollars	Dollars	Percent	Dollars	Percent
25	19,845.30	5,699.74	28.72	4,387.31	22.11
35	19,334.71	5,356.40	27.70	3,753.29	19.41
20	31,616.70	5,686.90	17.99	5,267.64	16.66
1	58,200.86	12,669.25	21.77	9,485.37	16.30
27	17,745.87	3,598.27	20.28	2,710.56	15.27
34	31,653.02	5,788.49	18.29	4,096.78	12.94
13	21,993.97	3,651.40	16.60	2,832.52	12.88
17	32,943.28	5,104.07	15.49	4,030.14	12.23
31	35,340.41	6,078.37	17.20	4,101.19	11.60
4	38,057.71	5,363.24	14.09	4,229.70	11.11
5	103,264.25	15,918.82	15.42	11,309.08	10.95
10	50,499.36	7,737.67	15.32	5,417.29	10.73
30	9,760.27	1,421.22	14.56	1,007.70	10.32
21	12,057.72	1,877.22	15.57	1,242.85	10.31
26	12,355.41	1,783.72	14.44	1,263.49	10.23
11	43,562.06	5,606.18	12.87	4,332.64	9.95
19	28,978.94	3,775.98	13.03	2,851.43	9.84
6	28,311.25	3,496.99	12.35	2,763.15	9.76
23	39,971.86	4,821.47	12.06	3,784.10	9.47
3	71,607.23	9,433.03	13.17	6,436.97	8.99
2	82,438.72	10,632.01	12.90	7,390.58	8.96
8	71,139.68	6,373.20	8 96	4,599.85	6.47
15	14,006.19	771.52	5.51	771.52	5.51
12	53,737.60	2,681.20	4.99	1,241.69	2.31
16	15,872.90	420.33	2.65	334.74	2.11
14	131,801.71	2,775.43	2.11	739.67	.56
22	73,914.49	1,535.92	2.08	81.60	.11
32	23,189.06	1,325.62	5.72	¹ 31.50	¹ .14
18	96,099.06	3,291.36	3.42	¹ 1,639.57	¹ 1.71
24	48,921.15	¹ 129.38	1.26	12,531.18	¹ 5.17
3	32,022.30	¹ 925.21	12.89	12,247.90	¹ 7.02
28	55,422.50	¹ 6,699.79	¹ 12.09	19,115.44	¹ 16 .45
9	44,688.60	¹ 5,663.94	¹ 12.67	¹ 7,965.40	¹ 17.82
29	15,259.30	¹ 2,118.12	¹ 13.88	12,957.70	¹ 19.38
7	33,719.34	¹ 5,805.49	115.84	¹ 7,233.33	¹ 21.45
36	27,805.52	5,805.49	120.88	18,427.74	¹ 30.31
Total	1,527,138.30	117,992.51	-	58,313.09	-
Average	42,420.51	3,277.57	7.73	1,619.81	3.82

¹Loss.

SOURCE: Based on audit reports

lable 7. - Net savings as a percentage of gross income, Illinois locker cooperatives, 1940-41 to 1947-48

Year	Net savings before income tax and interest	Net savings after income tax and interest
	Perc	cent
1940-41	16.62	12.24
941-42	20.51	15.59
942-43	23.46	17.24
1943-44	18.02	13.31
944-45	12.45	8.93
1945-46	14.44	10.39
1946-47	12.60	8.90
1947-48	7.73	3.82

SOURCE: Based on audit reports

Pounds processed varied among the associations from a high of 529 pounds in association 15 to a low of 159 pounds in association 29. Eight association compared with eleven the previous year, processed over 400 pounds per locker rented. Twelve associations, compared with 5 the previous year, processed less than 300 pounds.

Table 11 shows the average number of pounds of meat and poultry processed for the 4-year period 1944-45 through 1947-48. Volume processed per locker rented in 1947-48 was the lowest of the entire period.

While it is difficult to understand this substantial decline in volume, several of the following factors may be partly responsible. First, during and immediately following the war years many town patrons purchased meat for locker storage when it was difficult to obtain it from other sources. Now that meat is readily available through other channels, many of these patrons are purchasing more of their supply through retail markets and are storing less in their lockers. Second, the high price of meat during 1948 discouraged many patrons, particularly nonproducers, from purchasing meat in large quantities for locker storage. Third, an increase in processing rates may have discouraged some patrons from storing as much meat as they did in prior years.

LABOR AND MANAGEMENT EFFICIENCY

As pointed out labor and management accounts for nearly half of all expenses in locker plant operations. This percentage varies between associations from a low of 40 percent to a high of 58 percent. Because labor cost represents such a substantial portion of total expenses, and because it is an item that lends itself to improvement it seemed advisable to devise some means of measuring the efficiency of labor among the associations.

Table 8. - Net savings as a percentage of investment in fixed assets before deduction of income tax and interest for 27 Illinois locker cooperatives 1947-481

Association	Fixed assets	Net savings	Net savings as percentage of fixed assets
10	\$48,764.31	\$7,737.67	15.87
13	23,412.72	3,651.40	15.60
25	38,790.47	5,699.74	14.69
35	41,227.16	5,356.40	12.99
27	27,928.92	3,598.27	12.88
20	44,844.75	5,686.90	12.68
7	40,314.91	5,104.07	12.66
1	46,589.04	5,606.18	12.03
4	52,269.35	5,363.24	10.26
6	37,169.99	3,496.99	9.41
4	61,970.26	5,788.49	9.34
2	114,971.02	10,632.01	9.25
1	72,569.35	6,078.37	8.38
0	17,313.82	1,421.22	8.21
5	195,012.90	15,918.82	8.16
1	26,883.92	1,877.22	6.98
6	27,404.45	1,783.72	6.51
3	147,989.03	9,433.03	6.37
9	62,296.05	3,775.98	6.06
5	13,423.59	771.52	5.75
3	90,970.30	4,821.47	5.30
.6	8,890.43	420.33	4.73
22	141,120.92	1,535.92	1.09
3	104,686.48	² 925. 21	² .88
9	61,715.97	² 2,118.12	² 3.43
9	153,642.34	² 5,663.94	² 3.69
8	177,429.70	² 6,699.79	² 3.78
otal or average	\$1,879,602.15	\$100,151.90	5.33

 $^{^{1}\}mbox{Excludes}$ associations making major additions to facilities during the year. $^{2}\mbox{Loss}$

SOURCE: Based on audit reports

Table 9. - Net savings as a percentage of investment in fixed assets before payment of income tax and interest, Illinois locker cooperatives 1940-41 to 1947-48

Year	Net savings as a percentage of investment
	Percent
1940-41	6.77
1941-42	11.20
1942-43	14.56
1943-44	12.98
944-45	7.86
1945-46	10.00
1946-47	11.34
1947-48	5.33

 1 Excludes various associations for specific years when such associations were undertaking major expansion programs.

SOURCE: Based on audit reports

Labor and management efficiency, as used in this analysis, is defined as the amount of salaries and wages paid in a given period compared with total receipts from processing during the same period. It does not measure the output of labor. In making this comparative analysis, it is recognized that part of the cost of labor should be charged to sales and the operation of the locker room. However, the amount of labor spent in the locker room is negligible and except for a limited number of associations the labor used in making sales is small.

Although there may be some error in this method of analysis, processing income, it is felt provides the most satisfactory basis for measuring labor and management efficiency in most associations. Table 12 is designed so that labor and management efficiency can be compared between associations making approximately the same charges for cutting, wrapping, freezing, and grinding, and offering the same processing services. Associations charging from 3 to 4 cents per pound are in group I and those charging 2 to 3 cents per pound are in group II.

The associations are then further grouped according to services offered so that the associations offering slaughtering are shown separately from those not offering this service.

The months of July, August, and September showed the highest labor cost per dollar of processing income, with a peak in July when these cooperatives spent \$1.44 for labor for each dollar received from processing (table 12). The most favorable months were December, January, February, and March with lowest labor cost in December when 82 cents was spent for labor out of each dollar received from processing. In general the winter and early spring months were the most profitable due to the high volume of meat processed during this period. Substantial volume of fruits and vegetables during June also held labor costs per dollar of processing income down reasonably well during that month. Figure 2

Table 10. - Lockers rented, total pounds processed, and average pounds of meat and poultry processed per locker rented in 36 Illinois locker cooperatives, 1947-48

Association	Lockers rented ¹	Total pounds ²	Pounds processed per locker rented
15	481	254,600	529
9	726	381,100	525
4	1,067	552,700	518
27	347	161,200	465
35	454	205,000	452
3	2,109	906,400	430
11	1,255	514,500	410
20	829	335,200	404
2	2,621	1,031,500	394
6	1,020	396,400	389
13	796	304,000	382
1	1,783	678,100	380
16	527	197,300	374
22	1,680	612,800	3 65
23	1,056	384,600	364
18	2,919	949,500	325
5	2,807	901,700	321
25	740	236,600	320
30	370	115,600	312
34	1,028	320,200	311
8	1,510	468,800	310
31	1,031	319,800	310
10	1,628	497,700	306
14	3,903	1,175,600	301
12	1,791	530,100	296
32	693	202,700	292
24	1,297	374,500	289
33	1,037	286,900	277
17	1,107	284,800	257
7	1,470	366,000	249
26	425	97,000	228
36	976	206,200	211
21	612	121,400	198
19	1,095	202,100	185
28	2,227	394,500	177
29	707	112,100	159
Total or average	46,124	15,079,200	327

Lockers rented computed by dividing earned locker rentallincome by average rental rate. Includes temporary lockers.

2 Poundage secured from association records or computed by dividing cutting, wrapping, freezing,

and grinding income by rate for this service.

Table 11. - Average pounds of meat and poultry processed per locker rented per year, Illinois locker cooperatives, 1944-45 to 1947-48

Year	Pounds processed per locker rented
1944-45	384
1945-46	425
1946-47	394
1947-48	327

SOURCE: Based on audit reports and association's records

shows total processing income compared with total labor costs by months. This indicates that labor costs exceeded processing income in 8 out of 12 months.

Compared with former years (fig. 3) it would appear that the improvement made in evening out processing volume made in 1946 and 1947 did not continue in 1948. This chart shows that there is a real need for increasing processing or other revenue producing service during the summer and fall months.

The data in table 13 and in figure 3 indicate in general that the associations showed less efficiency in the use of labor and management than in former years. Total cost of labor and management for 1947-48 was \$1.04 per dollar of processing income compared with 96 cents in 1946-47; 92 cents in 1945-46; \$1.01 in 1944-45; and 92 cents in 1943-44. Labor and management exceeded processing income in 8 months of the year in 1947-48 compared with 4 months in 1946-47 and 3 months in 1945-46.

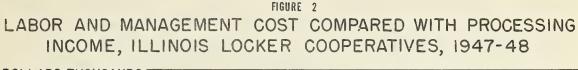
For plants in group I, charging 3 to 4 cents per pound for processing, the average cost of labor and management was \$1.07 per dollar of processing income and ranged from 77 cents to \$1.35. In only 4 months did processing income exceed labor costs. Associations in group I which offered cutting, wrapping, freezing, curing, and smoking averaged \$1.01 per dollar of processing income, while those associations offering slaughtering, in addition to these services, had labor costs averaging \$1.08 per dollar or processing income.

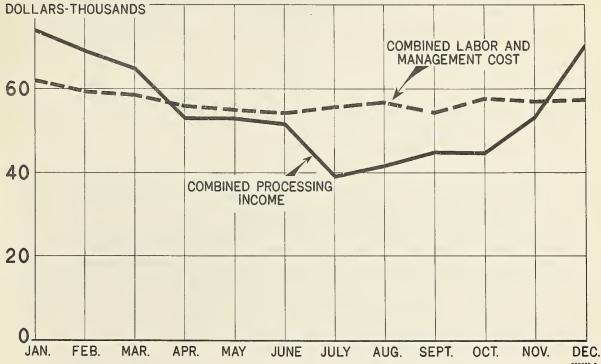
Associations in group II averaged \$1.01 labor cost per dollar of processing income and ranged from 64 cents in association 25 to \$1.63 in association 7. Plants in group II performing cutting, wrapping, freezing, curing, and smoking services averaged 97 cents per dollar of processing income, while those associations providing slaughtering in addition to these services averaged \$1.06 per dollar of processing income.

In general associations doing slaughtering, in addition to other services, show labor costs exceeding processing income for nearly two-thirds of the year, while associations doing no slaughtering reported labor cost exceeding processing income only one-half of the time. This unfavorable showing made by associations performing slaughtering service appears to

Table 12. - Labor and management cost per dollar of processing income, by months, 1947-48

Total	\$ 8 8 10 10 10 10 10 10 10 10 10 10 10 10 10	1.01	33.922888877	1.08	1.07	24489898444 2449898989999999999999999999	.97		1.06	1.01	1.04
December	で いよいひの の NNの G	.78	7,4,6,4,10,41,00,4	98.	. 85	487.8997.735.44 484.9997.834.834.834.834.834.834.834.834.834.834	. 82	88. 880 880 881 1881 172	.76	. 79	.82
November	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1.05	11111111111111111111111111111111111111	1.08	1.07	28.88282888 98.88282888	1.13	1	1.01	1.07	1.07
October	1.42 1.42 1.42 1.61	1.22	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1.50	1.45		1.19		1.08	1.14	1.29
September	 2001140	1.46	21.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1.10	1.14		1.23	11	1.37	1.30	1.21
August	\$7.51 1.38 1.28 1.28	1.23	. 1.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.	1.27	1.26	211771178 211771178 212334 21234 2124 2124 2124 2124 2124 2	1.59	11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1	1.37	1.48	1.36
July	1.07 1.07 1.03 1.53 1.53	1.28	1 111111111111111111111111111111111111	1.42	1.39	44288887122 442888871227	1.34	44444444444444444444444444444444444444	1.68	1.49	1.44
June	844. K. 74894 67898	1.10		1.10	1.10	17	86.	1.73 	1.06	1.01	1.03
May	\$ 72 944 1.692	.87	1	1.02	1.00	1	1.10	11	1.06	1.08	1.04
Apri1	\$1.49 1.70 1.00 1.47	1.38	2	1.08	1.12	2.000 2.000 2.000 2.000 2.000 2.000	.91	11. 11. 12. 12. 12. 12. 12. 12. 12. 12.	1.13	66:	1.05
March	\$.53 1.02 1.80 .96	83	553 553 11.22 11.22 11.33 13.79	.97	.95	.50 .57 .65 .75 .72 .72 .72 .73 .73 .73	.77	77. 775. 1.0033. 1.000 1.000 1.000 1.000	1.04	.87	8.
February	\$.62 1.12 1.87 1.07	16.	2.5. 2.7.3.5. 2.0.0. 2.0.0. 2.0.0. 3.0.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0. 3.0.0.0. 3.0.0.0. 3.0.0.0. 3.0.0.0. 3.0.0.0.0	16.	16.	550 568 1.00 1.00 1.00 1.27	.77	1.03 1.12 1.12 1.12 1.13 1.13	06.	.82	98.
Jamery	\$.73 .68 .76 .92	.80	264. 200. 200. 200. 200. 200. 200. 200. 20	06.	88.	. 61 . 65 . 65 . 77 . 77 . 77 . 78 . 79 . 79 . 79 . 79 . 79 . 79 . 79 . 79	.75	. 52 1.15 1.15 98 . 98 . 98 1.07	. 88	.81	-84
Association and services	Group I Cut, wrap, freese, and grind, (render snd/or cura and mmoke): 30 22 23 23 23 23 23	Average	Out wrap, freese, grind, alaughter, (render und/or cure and unnote); an	Average	Average group I	Group II Out, wrap, freeze, and grind, 25 (render and/or cure and manke): 11 11 11 4 4 6 6 6 6 13 13	Average	Out vrap. freeze, grind, slaughter, frender and/or cure and emoke). 35 and emoke). 31 2. 22 2.2 32 3.2 33 4.2 19 5.2 19 5.2	Average	Average group II	Combined average





be due largely to the fact that most of them are not utilizing either facilities or labor efficiently and need to substantially increase the volume handled.

Various comparisons were made between the 5 associations with the lowest labor cost per dollar of processing income and the 5 associations with the highest labor cost. The 5 associations with the lowest labor cost averaged 74 cents and the 5 associations with the highest, \$1.36 per dollar of processing income. In this discussion, the group with the lowest labor cost per dollar of processing income is termed the most efficient group and the high labor cost group the least efficient.

The average rates for processing services were almost the same for both groups. Services offered were also about the same. All the least efficient associations offered slaughtering while 3 of the 5 most efficient groups provided this service. All but one association, did curing and smoking. The most efficient group, with one exception, operated single locker plants while the least efficient group serviced from 2 to 5 plants. The most significant difference was in the volume of processing per locker. The most efficient group processed an average of 369 pounds per locker rented or 30 percent more than the average of 285 pounds for the least efficient group. In the least efficient group it cost almost twice as much for labor to produce one dollar of processing income as in the most efficient group.

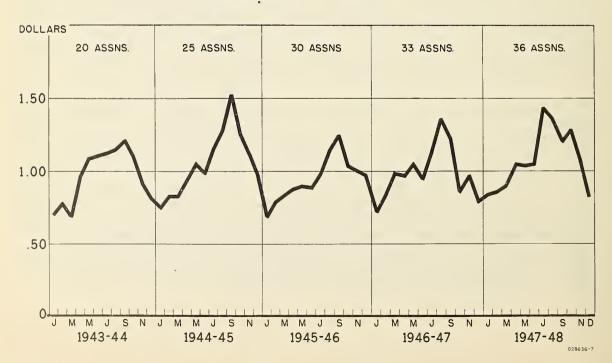
Table 13. - Labor and management cost per dollar of processing income and, processing income and margin on sales, Illinois locker cooperatives 1943-44 to 1947-48

Year	Per dollar of processing income	Per dollar of process- ing income and gross margin on sales
1943-44	.92	.83
1944-45	1.01	.91
1945-46	.92	.83
1946-47	.96	. 77
1947-48	1.04	.76

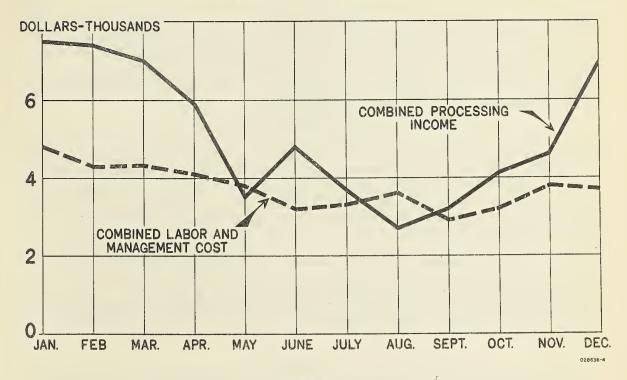
SOURCE: Based on association's records

The combined processing income and combined labor and management cost for the two groups are shown in figures 4 and 5. Combined processing income exceeded combined labor and management cost in all but 2 months in the 5 most efficient associations, (figure 4), while in the 5 least efficient associations in not one single month did processing income exceed labor cost (figure 5). For the most efficient group, yearly processing income averaged \$12,374 per association and labor and management cost \$9,116. In the least efficient group processing income averaged \$15,349 per association and labor cost, \$20,922. Processing income, per locker rented, averaged \$18.62 in the most efficient group and only \$12.95 in the least efficient.

LABOR & MANAGEMENT COST PER DOLLAR OF PROCESSING INCOME, ILLINOIS LOCKER COOPERATIVES
1943-44 TO 1947-48



LABOR AND MANAGEMENT COST COMPARED WITH PROCESSING INCOME IN 5 MOST EFFICIENT COOPERATIVES, 1947-48



LABOR AND MANAGEMENT COST COMPARED WITH PROCESSING INCOME IN 5 LEAST EFFICIENT COOPERATIVES, 1947-48



Because a number of associations have expanded their sales of food, locker supplies and by products, and for that reason utilize considerable amounts of labor in selling activities, labor costs were compared with income from both processing and selling in table 13 for the 5 years 1943-44 through 1947-48.

This table shows that while labor cost per dollar of processing income has increased since 1943, the total labor cost compared with total income from processing and selling has declined. This second method of labor analysis shows the increasing importance of sales in the operation of these locker cooperatives. In the case of most plants increased sales have required little or no additional labor.

POWER CONSUMPTION

Power and light costs are, on the average, the third largest expense in locker plant operation. Because of the general interest in the amount of power consumed by locker plants, an analysis was made of kilowatt-hours consumed in a representative group. For comparative purposes the information is shown on the basis of average kilowatt-hours consumed per locker capacity³ by months.

Average annual consumption for 65 plants in 1947-48 was 72 kilowatt-hours per locker capacity, but ranged from 41 to 131 kilowatt-hours (table 14).

³The term "locker capacity" is defined as the number of lockers that can be installed in existing zero-temperature rooms. On the average one locker requires 13.6 cubic feet of space.

Table 14. - Kilowatt-hours of electricity consumed per locker, based on total capacity, in Illinois cooperative locker plants, by months, 1943-44 through 1947-48

Month	1943-44	1944-45	1945-46	1946-47	1947-48
January	4.0	4.0	4.8	5.5	5.4
February	4.2	4.4	5.0	5.3	5.2
March	4.5	4.7	5.4	5.0	5.4
April	5.1	4.9	5.7	5.7	5.8
May	5.1	5.1	5.9	6.1	6.3
June	5.8	5.9	6.6	6.8	6.5
July	6.2	5.8	6.8	6.9	6.9
August	6.1	5.9	6.5	7.3	7.0
September	5.6	5.2	5.6	6.9	6.4
October	4.8	4.6	5.2	6.3	6.0
November	4.3	4.6	4.8	5.8	5.5
December	4.0	4.0	4.6	5.4	5.4
Total	59.7	59.1	66.9	73.0	71.8

¹ Excludes plants that do no processing.

SOURCE: Based on associations' records

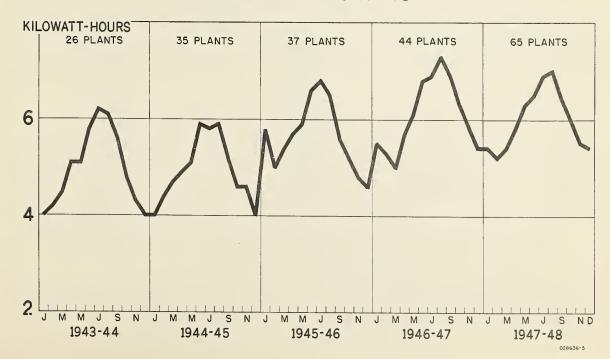
This wide range is believed to be due to differences in efficiency of insulation and refrigeration equipment, water temperatures, volume of space refrigerated, processing services offered, and total volume processed. In general, it was found that low power consuming plants performed less services and served few, if any, branch plants while high power consuming plants offered more services, including slaughtering, and processed for branches. There was also some indication that type of refrigeration used had some effect upon the amount of power consumed.

The more efficient plants consumed only 1 1/2 to 3 kilowatt-hours more during warm months than in cold months, while the least efficient plants used from 5 to 8 kilowatt-hours more in summer than in winter months. It is evident that outside temperatures are the greatest factor influencing power consumption. In those plants showing wide fluctuations between warm and cold months much of the fluctuation is due to inadequate or poorly installed insulation and refrigeration, or to unsatisfactory water conditions.

The average yearly power consumption per locker capacity steadily increased from 1934-44 to 1946-47 but showed a slight drop in 1947-48 (table 14 and figure 6).

Because of the fact that a different number of plants were analyzed in each of these years, an additional comparison was made of power consumption for 1943-44 and 1947-48 of the same plants having power data

AVERAGE KILOWATT - HOURS CONSUMED PER LOCKER
ILLINOIS COOPERATIVE LOCKER PLANTS
1943-44 TO 1947-48



for both periods (table 15). The 18 plants showed an increase in kilowatt-hours consumed per locker capacity of 9 kilowatt-hours over 1943-44. Some of this additional power consumption was undoubtedly due to expanded services, but part of it was caused by decreased efficiency of insulation and refrigeration equipment.

Power consumption in branch plants which do no processing is shown in table 16. In some respects this represents a more accurate comparison of power usage than in plants offering a variety of processing services inasmuch as no power is used except for maintaining low storage temperatures. Here again there was a wide variation in the amount of power used per plant. It ranged from a low of 36 kilowatt-hours per locker to a high of 76 kilowatt-hours per locker per year, with an average of 54 kilowatt-hours per locker. The majority of the plants used from 50 to 65 kilowatt-hours. The wide difference in power consumption indicates that some plants are very inefficient in its use due to lack of proper insulation, inadequate refrigeration, or unsatisfactory water temperatures.

SLAUGHTER PLANTS

More cooperatives added slaughtering services during 1947-48. Twenty-four associations now operate 25 slaughter plants for 56 locker plants with approximately 31,500 lockers installed. Five associations, are not included elsewhere in the study.

Table 15. - Average kilowatt-hours of electricity consumed per locker capacity in 18 Illinois cooperative locker plants, 1 1943-44 and 1947-48

Month	1943-44	1947-48
	Kilowat	t-hours
January	3.95	5.15
February	4.18	5.66
March	4.58	5.72
April	5.22	5.66
May	5.51	6.29
June	6.05	6.30
July	6.34	6.38
August	6.13	6.51
September	5.69	5.93
October	4.95	5.95
November	4.30	5.36
December	3.97	5.18
Total	60.87	70.09

¹ Identical plants used for both years.

SOURCE: Based on association's records

Table 16. - Kilowatt-hours of electricity consumed per locker, based on total capacity, in 14 Illinois cooperative locker plants offering no processing services, by months, 1947-48

Month	Kilowatt-hours consumed	Month	Kilowatt-hours consumed
January	3.5	July	5.7
February	3.3	August	6.0
March	3.8	September	5.7
April	4.2	October	4.6
May	4.8	November	3.8
June	5.8	December	3.1
		Total	54.3

SOURCE: Based on association's records

Information on volume of livestock slaughtered was obtained from 12 associations for the 1947-48 fiscal year (table 17). Total animals slaughtered was 15,065 head. Hogs made up 72 percent and cattle and calves 28 percent of this total. The average number of hogs slaughtered per plant was 898 and the average number of cattle and calves was 358 head. Volume ranged from 130 to 1,935 hogs and from 43 to 614 cattle per plant per year.

Months of heaviest slaughter of hogs were from October through March, while the heaviest cattle months were from December through April. Lightest months of slaughter for both cattle and hogs were from July through September. In most instances the number of animals slaughtered was substantially less than the volume processed through the locker plants served by the slaughtering plants. This indicates that either patrons are still slaughtering a sizable volume on farms, are having it done by outside slaughtering agencies, or are purchasing wholesale beef and pork in carcass form. The high price of live animals undoubtedly also has tended to reduce slaughtering volume, particularly for urban patrons.

It appears that there is a need for most associations operating slaughtering facilities to increase volume if this service is to operate efficiently. Another reason for low slaughtering volume may be the fact that some managers do not feel qualified or sufficiently trained to buy livestock, particularly cattle, and for that reason prefer to handle packer meat. A training school to teach such fundamentals as grading, estimating yields, weights, and quality should be of considerable value to managers.

FACTORS AFFECTING SAVINGS

Apparently a number of factors or conditions exerted an unfavorable influence upon net savings of associations. The more important factors were:

Table 17. - Slaughter volume by months in 12 Illinois locker cooperatives, 1947-48

47 Solution of	Associa-							Cattle			ļ			
47 50 51 65 51 57 30 41 34 36 46 63 43 53 44 33 34 44 45 40 37 39 44 46 </th <th>tion</th> <th>January</th> <th>February</th> <th>March</th> <th>April</th> <th>May</th> <th>June</th> <th>July</th> <th>August</th> <th>September</th> <th>October</th> <th>November</th> <th>December</th> <th>Total</th>	tion	January	February	March	April	May	June	July	August	September	October	November	December	Total
63 53 40 57 30 33 33 33 35 36 76 60 53 43 73 44 66 42 33 34 45 46 44 66 55 45 43 36 45 30 31 24 30 39 36 45 43 66 55 45 40 43 33 44 18 27 34 45 43 66 40 43 53 34 44 16 24 27 34 45 46 46 47 46 46 46 46 46 46 46 46 46 46 46 46 46 46 46 47 46 46 46 46 46 46 46 46 46 46 46 46 46 46 46 46 46 46 46	- 1	47	20	51	65	51	57	37	29	41	34	37	46	545
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60 53 73 73 51 42 30 39 36 45 43 69 55 44 43 31 44 33 49 27 33 19 14 33 49 17 27 34 36 48 33 49 17 21 33 19 14 20 27 34 36 45 47 47 47 47 47 47 46 46 47 47 47 46 46 47 47 47 46 46 47 47 47 47 47 </td <td>12</td> <td>53</td> <td>47</td> <td>51</td> <td>36</td> <td>43</td> <td>56</td> <td>42</td> <td>33</td> <td>4</td> <td>46</td> <td>41</td> <td>65</td> <td>557</td>	12	53	47	51	36	43	56	42	33	4	46	41	65	557
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1,065 1,083 990 851 876 889 544 523 730 904 1,028 1,291 89 90 82 71 73 74 45 44 61 75 86 108	35	80	65	53	18	27	27	25	77	35	40	72	87	551
89 90 82 71 73 74 45 44 61 75 86 108	Total	1,065	1,083	066	851	876	688	544	523	730	904	1,028	1,291	10,774
	Average	68	8	82	11	73	74	45	44	61	75	86	108	868

SOURCE: Based on associations records

- 1. Low processing volume
- 2. High seasonal fluctuations in processing volume
- 3. High labor cost compared with processing income
- 4. Low curing and smoking volume
- 5. High investment per locker capacity
- 6. Too large facilities for present volume
- 7. High power costs
- 8. High percentage of unrented lockers

In order to determine the effect of these unfavorable factors upon net savings each association was checked against each of these factors. The associations were divided in three groups according to their net savings or loss.

Group I includes associations reporting net savings from \$4.59 to \$11.80 per locker rented; group II from \$1.60 to \$4.56 per locker; and group III from a loss of \$7.80 to a savings of \$1.49 per locker rented.

Of the eight factors affecting savings adversely less than half of the associations in Group I could be classed as being affected by any of these factors and no association was affected by more than one factor. Two-thirds of the associations in Group II, however, were suffering from one or more of these unfavorable conditions and most of them were affected by two or more. In Group III all associations were affected and most of them by 4 or more of these unfavorable conditions.

Of course, each unfavorable factor does not have the same relative importance in its affect upon net savings. Nevertheless, any association suffering from any of these conditions should, if possible, take steps to correct the situation. All of the factors, with the exception of high investment per locker of capacity and in some cases high power consumption, lend themselves to change and improvement. Low processing volume, high labor cost per dollar of processing income, low curing volume, high percentage of unrented lockers, and high seasonal fluctuation in processing volume can be improved through a more aggressive selling program, both of services and products, better utilization of labor, securing more non-patron business, and providing additional services.

SUGGESTIONS AND CONCLUSIONS

Some of the major problems discovered in this study and suggested ways of meeting them are:

- 1. The survey shows that most plants constructed under present high costs are experiencing difficulty in making savings because of high fixed costs. On the basis of this survey alone it would appear that most associations would be wise to forego any major expansion or new construction until either costs decline or more efficient methods of operation are developed.
- 2. A substantial decline in processing volume makes it necessary that management devote more time to building volume. Low volume not only

adversely affects locker plant earnings but increases the per unit cost of locker storage to the patron.

- 3. Locker cooperatives should make more efficient use of labor. The increasing cost of labor per dollar of processing income indicates that the increased labor cost has not been entirely compensated for by increased rates or greater productivity.
- 4. Some locker cooperatives have too many patrons who aren't paying their way. These patrons, mostly non-producers, have too little processing and thus are poor patrons to the cooperative. Greater effort should be made to get high volume patrons as well as to increase the volume of the low volume patrons by encouraging them to buy meat, poultry, and frozen foods for locker storage. Many locker plants offer patrons a considerable discount on bulk purchases of these items and thereby increase volume.
- 5. Power costs were very high in some plants. Some of the increased cost is probably due to deterioration of insulation and equipment. In other instances it may be due to faulty equipment. Such plants should have this equipment carefully checked and the necessary changes and repairs made.
- 6. Several of the larger associations, particularly those expanding their merchandising departments, are in need of additional operating capital. Some of these associations are operating on a few thousand dollars of operating capital. In order to operate more nearly to capacity additional operating capital is needed. Some of the larger associations carrying on substantial merchandising activities may easily require \$25,000 to \$30,000 operating capital.
- 7. Many associations could increase revenue by developing new services. Some associations need to install equipment for these new services while others can expand their volume by using present equipment. Processing for home freezer owners is a service most plants can offer without installing additional equipment. Some associations have poultry dressing facilities which are used only for processing locker patrons poultry. In many instances additional volume could be secured from non-patrons, thus increasing income without additional investment. With an increase in the number of self-service meat counters in grocery stores, many locker plants may find additional revenue by supplying prefabricated and wrapped meat for these outlets. Most plants now have adequate equipment and trained personnel to provide this service. It should be possible for the locker plant to perform these services more efficiently than the grocery stores themselves. In almost every locality the association manager can develop some new demand for his processing services.
- 8. Most locker associations, particularly those with slaughter facilities, have considerable quantities of edible byproducts which they don't utilize efficiently. In many instances there is no outlet for this product in its raw form and thus much of it is sold along with the inedible offal. Improvements are needed in the utilization of edible offal if cooperative locker plants are to be successful in competing with packers in the sale of meat products.

- 9. Locker cooperatives have given consideration from time to time, to install rendering plants to process inedible offal from associations operating slaughter plants. In view of the low price now quoted for grease and the high cost of installing rendering facilities, it would appear wise to wait until construction costs decline and prices of manufactured products become better stabilized.
- 10. The managers of some associations have the responsibility of buying livestock in connection with their slaughtering and selling operations. Many of these managers are not trained in livestock buying and, therefore, are handicapped in this phase of their work. The State association might assist in training these managers through the development of short courses, training conferences, or direct instruction.
- 11. Associations in some localities may find it advantageous to coordinate their livestock buying and trucking with local livestock marketing associations. Such a program should enable the locker association to secure the type and grade of livestock it needs, and should also reduce transportation and buying costs.
- 12. A more aggressive and intelligent merchandising program, both with locker and home-unit patrons, is needed in order to increase volume of products processed and sold.
- 13. Closer attention to details and a study of internal costs in order to discover where leaks are taking place should improve operating results. This may call for changes in operating methods, rearrangement of equipment to save labor and a better system of keeping accounts and records.
- 14. More attention needs to be given to sanitation. Cooperatives should keep plants spotlessly clean, not only to avoid spoilage but to create confidence and good will on the part of patrons.
- 15. Locker plants need to aggressively increase processing revenue during slack summer months through increased poultry dressing, and more fruit and vegetable processing. An educational program designed to encourage patrons to even out slaughter of meat animals through out the year would also help.

The modern locker plant has a number of advantages over other types of food processors located in large cities at some distance from production areas:

- 1. It is close to source of supply
- 2. It provides a superior method of food preservation
- 3. Wages, taxes and other costs are lower in small towns than in cities.
- 4. It requires less operating capital and assumes less speculative risks.

- 5. It has several sources of revenue rentals, patrons processing, custom work for stores, hotels, etc. in addition to income received from the sale of its products either at wholesale oreretail.
- 6. It has the further advantage of being a home industry which assures both local good will and support.
- 7. If properly operated it should be a means of reducing food costs to consumers.
- 8. It offers a local market for limited quantities of high quality livestock, poultry, and fruits and vegetables, and by so doing creates competition in a local community.

It is becoming increasingly evident from our studies covering a period of the last 8 years that many locker plants are moving out of a strictly service type business, largely carried on with farmer patrons, towards semi-commercial processing and selling operations.

As they add more of these commercial operations locker cooperatives will need better trained buying personnel, accounting records better adapted to their operations, improved processing techniques, more effective and up-to-date merchandizing methods, and increased operating capital.